

REMARKS

This communication is being filed in response to the final Office Action having a mailing date of January 7, 2009, in which a three (3) month Shortened Statutory Period for Response has been set, due to expire April 7, 2009. No claims are amended, added, or canceled. No new matter has been added to the application. Upon entry of this communication, claims 1-19 remain pending. Reconsideration of the present application in view of the following remarks is respectfully requested.

I. Request for Telephone Interview

In light of the specific rejections and Examiner's indications in the final Office Action, the attorney of record Thomas J. Satagaj believes that agreement could be reached during a telephone interview. Mr. Satagaj would answer any questions that the Examiner may have and further discuss the presented network technology in order to reach agreement. At the Examiner's convenience, a telephone call to Mr. Satagaj at 206-622-4900 is respectfully encouraged.

II. Examiner's Response to Applicant's Remarks

On Pages 2-3, the present final Office Action asserts that "the transmitter acts as a repeater in the sense that segments of packets are being continuously transmitted wherein the receiver receives the packets and stored good and bad segments for transmission." Respectful disagreement with this position is drawn. It is not possible for *Alapuranen's* transmitter to act as the repeater of claim 1.

According to claim 1, three elements, *inter alia*, are positively recited—a transmitter, a receiver, and at least one repeater. Claim 1 further recites, *inter alia*, particular steps performed by each of the three elements. For example, "transmitting, by the transmitter," "forwarding, by the at least one repeater," and "issuing ... by the receiver." So while it may be considered that *Alapuranen's* transmitter stores and re-transmits, it cannot be accepted that *Alapuranen's* transmitter performs the step of "forwarding." That is, if *Alapuranen's* transmitter is, for example, a mobile wireless user terminal 102-n (FIG. 1) or an ARQ transmitter 124 (FIG. 3), then the transmitter does not transmit a data packet to itself and then forward the data packet

to a receiver. If *Alapuranen*'s transmitter is, for example, a router 107-n (FIG. 1), the router does not transmit the same data packet that was received (Paragraphs [0026], [0037-0038], [0040]).

Paragraph [0037] of *Alapuranen* is cited in the Response to Applicant's Remarks for support in the Office Action of a transmitter capable of "storing, by the at least one repeater node, a copy of the forwarded data packet" and "the at least one repeater node initiating retransmission of the data packet by transmitting the stored copy of the forwarded data packet to the receiver." Yet, nowhere in the *Alapuranen* reference, including paragraph [0037], are each of these capabilities disclosed, taught, or suggested. If such capabilities exist, specific reference to said capabilities is requested.

Instead of a repeater storing and retransmitting as required by claim 1, *Alapuranen*'s invention works differently. That is, even though the *Alapuranen* reference discloses routers 107-n (Fig. 1), which may be a type of repeater, none of *Alapuranen*'s routers perform all of the steps required by the repeater of claim 1. Specifically, none of *Alapuranen*'s routers disclose, teach, or suggest each of the steps of "forwarding ... the data packet," "storing ... a copy of the forwarded data packet," and "initiating retransmission of the data packet." As disclosed in *Alapuranen*'s Paragraphs [0026], [0037-0038], [0040], *Alapuranen*'s invention merely modifies and transmits data segments. Accordingly, claim 1 is allowable over the *Alapuranen* reference alone or in combination with any of the other cited references, and reconsideration of the previously entered remarks is respectfully sought.

III. Objections Under 35 U.S.C. § 112

At Page 3 of the final Office Action, claims 10 and 12-17 were cited for using the word "adapted," and advice was provided to modify the "adapted terminology in the claims in order to avoid any potential 35 U.S.C. 112 issues." The Examiner is thanked for this opportunity to amend claims 10 and 12-17; however, no claim amendments have been made in this communication. Any particular suggestions offered in a future communication from the Examiner will be respectfully considered.

IV. Discussion of the claims and cited references

The present final Office Action rejects claims 1-3 and 6-7 under 35 U.S.C. § 103(a) as being unpatentable over *Szymanski* (U.S. Patent No. 6,851,086) in view of *Alapuranen* (U.S. Patent Application Publication No. 2004/0010736).

Claims 10 and 15-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Diepstraten* (U.S. Patent No. 5,339,316) in view of *Alapuranen*.

Claims 18-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Diepstraten*, *Alapuranen*, in view of *Gu* (U.S. Patent No. 6,845,089).

Claims 11-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Diepstraten*, *Alapuranen*, in view of *Szymanski*.

Claims 4-5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Szymanski*, *Alapuranen*, in view of *Gu*.

Claims 8-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Szymanski*, *Alapuranen*, in view of *Diepstraten*.

For the reasons set forth below, these rejections are respectfully traversed. It is therefore kindly requested that the rejections be reconsidered and withdrawn.

a. Independent Claim 1: Forwarding and Storing

Independent claim 1 recites, *inter alia*, “forwarding, by the at least one repeater node, the data packet to the receiver and storing, by the at least one repeater node, a copy of the forwarded data packet.” It is respectfully reasserted that these limitations are not met by the *Szymanski* and *Alapuranen* references relied upon by the present Office Action to reject claim 1.

The final Office Action admits now, as in previous communications, that *Szymanski* does not teach the “forwarding” and “storing.” Instead, *Alapuranen* is relied upon to supply these steps.

Paragraphs [0022], [0025], and [0037] of *Alapuranen* are cited to allegedly disclose forwarding and storing a copy of a forwarded data packet by the repeater node. These allegations by the final Office Action are respectfully traversed herein.

The paragraphs of *Alapuranen* relied upon by the final Office Action do not teach forwarding the data packet that was transmitted by the transmitter and storing a copy of the forwarded packet. Paragraph [0022] of *Alapuranen* discusses the arrangement of nodes 102, 106, and 107. Paragraph [0025] of *Alapuranen* discusses IP, ARP, and other protocols performed by nodes 102, 106, and 107 performing. And Paragraph [0037] of *Alapuranen* discusses the retransmission of erroneous segments of a packet.

The final Office Action has not identified any specific teachings in paragraphs [0022], [0025], and [0037] of *Alapuranen* that allegedly meet the limitations of claim 1 pertaining to forwarding and storing a copy of the forwarded data packet. It is respectfully submitted that *Alapuranen* has no such teachings. Plainly and simply, *Alapuranen*'s nodes do not forward a data packet transmitted by the transmitter and do not store the data packet transmitted by the transmitter. At most, *Alapuranen*'s nodes transmit modified packet segments, and store modified packet segments. In view of the above, it is therefore respectfully submitted that claim 1 is allowable over *Szymanski* and *Alapuranen*.

b. Independent Claim 1: Initiating Retransmission of the Stored Copy

Independent claim 1 recites, *inter alia*, "the at least one repeater node initiating retransmission of the data packet by transmitting the stored copy of the forwarded data packet to the receiver." As stated above, the data packet of claim 1 is transmitted by a transmitter. The data packet is forwarded by a repeater and stored in the repeater. In the event of communication failure, the repeater retransmits its stored copy. It is respectfully reasserted that these limitations are not met by the *Szymanski* and *Alapuranen* references relied upon by the present Office Action to reject claim 1.

The final Office Action admits now, as in previous communications, that *Szymanski* does not teach the "retransmission of the ... stored copy." *Alapuranen* is relied upon to supply these steps.

Paragraphs [0030], [0037-0038], [0040], and [0043] are cited to allegedly disclose the repeater node "initiating retransmission ... by transmitting the stored copy of the forwarded data packet." These allegations by the final Office Action are respectfully traversed herein.

The paragraphs of *Alapuranen* relied upon by the final Office Action do not teach initiating retransmission by transmitting the stored copy of the forwarded data packet. Paragraph [0030] of *Alapuranen* discusses error coding of segment packets. Paragraph [0038] describes how ARQ nodes attach error correction and error detection codes to data segments and a ACK/NACK protocol at the ARQ level. Paragraph [0040] describes the ARQ style protocol of Paragraph [0038] in more detail. And Paragraph [0043] summarizes the results of the ARQ style protocol. None of the cited paragraphs meet the limitations of claim 1.

The ARQ style protocol requires ARQ nodes to read packets, add particular information to segments of those packets, and then transmit the segments on to the next node. As described above, the ARQ nodes do not forward the data packets transmitted by the transmitter and do not store the data packets transmitted by the transmitter. Instead, *Alapuranen* creates and transmits segments. Then, when particular segments fail, *Alapuranen* retransmits only the particular segments.

The final Office Action has not identified any specific teachings in paragraphs [0030], [0037-0038], [0040], and [0043] of *Alapuranen* that allegedly meet the limitations of claim 1 pertaining to forwarding and storing a copy of the forwarded data packet. It is respectfully submitted that *Alapuranen* has no such teachings. Accordingly, it is therefore respectfully submitted that claim 1 is allowable over *Szymanski* and *Alapuranen*.

c. Independent Claims 10 and 15

Independent claim 1 recites, *inter alia*, “the at least one repeater node initiating retransmission of the data packet by transmitting the stored copy of the forwarded data packet to the receiver.” As stated above, the data packet of claim 1 is transmitted by a transmitter. The data packet is forwarded by a repeater and stored in the repeater. In the event of communication failure, the repeater retransmits its stored copy. It is respectfully reasserted that these limitations are not met by the *Szymanski* and *Alapuranen* references relied upon by the present Office Action to reject claim 1.

Independent claim 10 as presented herewith recites, *inter alia*, “a pending packet buffer to store copies of the forwarded data packets” and “retransmission ... by transmitting the

stored copies of these data packets.” Independent claim 15 as presented herewith recites similar limitations. It is respectfully submitted that claims 10 and 15 are allowable over the references relied upon by the present Office Action for rejection.

Remarks in previous responses made with respect to claims 10 and 15 have not been addressed in detail in the final Office Action. Nevertheless, the rejections presented in the final Office Action have been maintained. Although the claim language of each of independent claims 1, 10, and 15 stands alone, it is to be appreciated that the remarks made above with respect to claim 1 and with regard to forwarding, storing, and retransmission of transmitted data packets may be suitably applied to claims 10 and 15. Accordingly, independent claims 10 and 15 are in condition for allowance.

d. Dependent Claim 3

Dependent claim 3 recites, *inter alia*, “retransmission is effected by said at least one repeater node and the transmitter.” It is respectfully asserted that this limitation is not met by the *Szymanski* and *Alapuranen* references relied upon by the present Office Action to reject claim 3.

The final Office Action admits now, as in previous communications, that *Szymanski* does not teach the retransmission by the repeater and transmitter. Instead, *Alapuranen* is relied upon to supply this step.

Paragraphs [0022] and [0025] of *Alapuranen*, with no further specificity in the final Office Action, are cited to allegedly disclose the retransmission by the repeater and transmitter. This rejection is respectfully traversed.

As described above, *Alapuranen* at most teaches an ARQ protocol wherein packets are broken up into segments, new information is added, and the segments are sent to a receiver. In the event of communication failure, particular segments are retransmitted. See Paragraphs [0026], [0030], and [0037]. Importantly, however, *Alapuranen* clearly teaches only a one-to-one, transmitter-to-receiver protocol. That is, whenever a failure is detected by a receiver, the single transmitting ARQ node receives a NACK and retransmits the failed segments. No other node performs the retransmission. This one-to-one relationship in the ARQ

protocol is evident in *Alapuranen*'s FIG. 3, and described in particular in Paragraphs [0026], [0037], and [0038]. Accordingly, it is therefore respectfully submitted that the rejection of claim 3 has been traversed and reconsideration is requested.

c. Dependent Claim 5

Dependent claim 5 recites, *inter alia*, "the transmitter does not listen for NACK signals relating to its own transmitted data packets." It is respectfully asserted that this limitation is not met by the *Szymanski* and *Gu* references relied upon by the present Office Action to reject claim 5. Col. 1, lines 39-50 of *Gu* describe several components of a 3G mobile telephone communication protocol. An RLP and an RDP protocol are described, but in the context of RLP and RDP, *Gu* clearly states that a determination is made whether or not to send the same SDB frame or another SDB frame depending on the receipt of an ACK or NACK. Accordingly, the cited *Gu* sections fail to disclose, suggest, or teach a transmitter not listening for NACK signals relating to its own transmitted data packets. Respectful reconsideration of the rejection of claim 5 is requested.

IV. Conclusion

Overall, none of the references singly or in any motivated combination disclose, teach, or suggest what is recited in the independent claims. Thus, given the above remarks, the independent claims are now in condition for allowance. The dependent claims that depend directly or indirectly on these independent claims are likewise allowable based on at least the same reasons and based on the recitations contained in each dependent claim. Each of the dependent claims recite additional limitations not contained in their respective parent claims, and are therefore further believed allowable as defining over the applied references.

If the undersigned attorney (Thomas Satagaj) has overlooked a teaching in any of the cited references that is relevant to the allowability of the claims, the Examiner is requested to specifically point out where such teaching may be found. If there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact Mr. Satagaj at (206) 622-4900.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

No fee for additional claims is due by way of this Amendment. The Director is authorized to charge any additional fees due by way of this Amendment only, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now clearly allowable. Favorable reconsideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,
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